

WHAT IS CLAIMED IS:

1. An information medium which has a data area in which stream data can be recorded in a predetermined data recording unit, and a management area in which  
5 management information that pertains to the stream data can be recorded, wherein the management information can record:

first management information used to access the stream data;

10 second management information, being different from the first management information, used to access the stream data; and

third management information indicating a relationship between the first management information  
15 and second management information.

2. An information medium according to claim 1, wherein the stream data includes a bitstream compressed based on MPEG, and the second management information corresponds to a playback time of the stream data.

20 3. An information medium according to claim 1, wherein the management information includes a stream file information table which manages a stream object that forms a portion of contents of the stream data,  
the stream file information table includes stream  
25 object information that manages the stream object, and  
the stream object information includes access unit general information including the first management

information, and the third management information.

4. An information medium according to claim 1,  
wherein the first management information includes  
information used upon transferring the stream data, and  
5 the second management information includes information  
used upon displaying the stream data.

5. An information medium according to claim 2,  
wherein the first management information includes  
information used upon transferring the stream data, and  
10 the second management information includes information  
used upon displaying the stream data.

6. An information medium according to claim 3,  
wherein the first management information includes  
information used upon transferring the stream data, and  
15 the second management information includes information  
used upon displaying the stream data.

7. An information medium according to claim 1,  
which has a data area in which stream data can be  
recorded in a predetermined data recording unit, a  
20 management area in which management information that  
pertains to the stream data can be recorded, and first  
time management information that pertains to the stream  
data, wherein

the management information includes recording  
25 information of the stream data.

8. An information medium according to claim 2,  
which has a data area in which stream data can be

recorded in a predetermined data recording unit,  
a management area in which management information that  
pertains to the stream data can be recorded, and first  
time management information that pertains to the stream  
5 data, wherein

the management information includes recording  
information of the stream data.

9. An information medium according to claim 3,  
which has a data area in which stream data can be  
10 recorded in a predetermined data recording unit, a  
management area in which management information that  
pertains to the stream data can be recorded, and first  
time management information that pertains to the stream  
data, wherein

15 the management information includes recording  
information of the stream data.

10. An information medium according to claim 4,  
which has a data area in which stream data can be  
recorded in a predetermined data recording unit, a  
20 management area in which management information that  
pertains to the stream data can be recorded, and first  
time management information that pertains to the stream  
data, wherein

the management information includes recording  
25 information of the stream data.

11. An information medium according to claim 1,  
which has a data area in which stream data can be

recorded in a predetermined data recording unit, a management area in which management information that pertains to the stream data can be recorded, first time management information that pertains to the stream data, and a time management unit which is different from the first time management information and pertains to a playback time of the stream data, wherein

the management information includes recording management information that pertains to recording of the stream data, and

the time management information that pertains to recording is described in a format of the first time management information or the time management unit that pertains to the playback time.

12. An information medium according to claim 2, which has a data area in which stream data can be recorded in a predetermined data recording unit, a management area in which management information that pertains to the stream data can be recorded, first time management information that pertains to the stream data, and a time management unit which is different from the first time management information and pertains to a playback time of the stream data, wherein

the management information includes recording management information that pertains to recording of the stream data, and

the time management information that pertains to

recording is described in a format of the first time management information or the time management unit that pertains to the playback time.

13. An information medium according to claim 3,  
5 which has a data area in which stream data can be recorded in a predetermined data recording unit, a management area in which management information that pertains to the stream data can be recorded, first time management information that pertains to the stream  
10 data, and a time management unit which is different from the first time management information and pertains to a playback time of the stream data, wherein

the management information includes recording management information that pertains to recording of  
15 the stream data, and

the time management information that pertains to recording is described in a format of the first time management information or the time management unit that pertains to the playback time.

14. An information medium according to claim 4,  
20 which has a data area in which stream data can be recorded in a predetermined data recording unit, a management area in which management information that pertains to the stream data can be recorded, first time management information that pertains to the stream  
25 data, and a time management unit which is different from the first time management information and pertains

to a playback time of the stream data, wherein

the management information includes recording management information that pertains to recording of the stream data, and

- 5           the time management information that pertains to recording is described in a format of the first time management information or the time management unit that pertains to the playback time.

- 10           15. An information medium according to claim 7, which has a data area in which stream data can be recorded in a predetermined data recording unit, a management area in which management information that pertains to the stream data can be recorded, first time management information that pertains to the stream data, and a time management unit which is different from the first time management information and pertains to a playback time of the stream data, wherein

- 15           the management information includes recording management information that pertains to recording of the stream data, and
- 20           the time management information that pertains to recording is described in a format of the first time management information or the time management unit that pertains to the playback time.

- 25           16. An information recording method that uses an information medium which has a data area in which stream data can be recorded in a predetermined data

recording unit, and a management area in which management information that pertains to the stream data can be recorded, wherein the management information can record first management information used to access the stream data; second management information, being different from the first management information, used to access the stream data; and third management information indicating a relationship between the first management information and second management information, said information recording method comprising:

extracting the first management information from stream data to be recorded;

extracting the second management information from the stream data to be recorded;

recording the stream data in the data area of said information medium; and

recording the third management information in the management area of said information medium.

17. An information recording method that employs a stream data recording device for recording stream data, using a predetermined reference clock, obtained from a stream data supply device, and that employs an information medium which has a data area in which stream data can be recorded in a predetermined data recording unit, and a management area in which management information that pertains to the stream data

can be recorded,

wherein the management information can record first management information used to access the stream data; second management information, being different from the first management information, used to access the stream data; and third management information indicating a relationship between the first management information and second management information,

said information recording method comprising:

executing a synchronization process of the predetermined reference clock between the stream data supply device and the stream data recording device;

correcting or modifying the third management information based on a result of the synchronization process of the reference clock; and

recording the corrected or modified third management information in the management area of the information medium.

18. An information recording method according to claim 17, wherein the third management information is created before the synchronization process of the reference clock is executed.

19. An information playback method that employs a stream data playback device having an internal clock, said information playback method comprising:

adjusting said internal clock to the predetermined reference clock when said stream data playback device



plays back the stream data from the information medium on which information is recorded according to the method of claim 17.

20. An information playback method for playing  
5 back stream data from an information medium which has a data area in which the stream data can be recorded in a second data unit including a first data recording unit, and a management area in which management information that pertains to the stream data can be  
10 recorded, wherein the management information can record first management information used to access the stream data; second management information, being different from the first management information, used to access the stream data; and third management information  
15 indicating a relationship between the first management information and second management information, said information playback method comprising:

when the stream data has a plurality of continuous second data units,

20 checking a position difference from a neighboring boundary position of the plurality of continuous second data units to a position of the first data recording unit indicated by the second management information;

starting read of the stream data recorded on the  
25 information medium from the neighboring boundary position but discarding or ignoring read data until the position of the first data recording unit indicated

by said position difference; and

starting playback of the stream data recorded on  
the information medium from the position of the first  
data recording unit indicated by said position  
5 difference.

21. An information playback method for playing  
back stream data from an information medium which has  
a data area in which the stream data can be recorded in  
a second data unit including a first data recording  
10 unit, and a management area in which management  
information that pertains to the stream data can be  
recorded, wherein the management information can record  
first management information used to access the stream  
data; second management information, being different  
15 from the first management information, used to access  
the stream data; and third management information  
indicating a relationship between the first management  
information and second management information, said  
information playback method comprising:

20 checking a start address of the second data unit  
including the first management information;

discarding or ignoring playback information other  
than an access position of the stream data indicated as  
the first management information, using the checked  
25 start address of the second data unit; and

sequentially playing back or sequentially  
displaying only playback information at the access

position of the stream data.

22. A data structure applicable to an information medium which has a data area in which stream data can be recorded in a predetermined data recording unit, and  
5 a management area in which management information that pertains to the stream data can be recorded, wherein the management information is capable of recording  
first management information used to access the stream data;

10 second management information, being different from the first management information, used to access the stream data; and

third management information indicating a relationship between the first management information  
15 and second management information.